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NAVAL POSTGRADUATE SCHOOL STUDIES DESIGNS FOR SEABASING, AIRLIFT

The Naval- Postgraduate School is studying design concepts for seabasing and heavy lift aircraft as part of an exercise m expeditionary warfare solutions.

The project is an academic exercise meant to teach students design processes, said Charles Calvano, technical director for the Meyer Institute of System Engineering who is leading the project. The expeditionary warfare division within the chief of naval operations, staff *is* interested in the outcome, but did not request the study, he said.

Students are thinking about future maritime prepositioning ships**, amphibious** assault ship replacements and Large Medium-Speed Roll On/Roll Off ships as possible seabasing platforms, he said in an interview last week. Seabasing lately has become an item of interest, he said.

For example, the Navy Warfare Development Command and the Marine Corps **combat Development** Command recently developed a concept paper on Enhanced Networked Seabasing (Inside the Navy, Sept. 9, p9). Retired Rear Adm. Robert Sprigg, NWDC commander at the time, said last month that it was premature to say what kind of ship would fill that role.

Calvano said the students are considering a single ship concept with several variants to build in larger numbers to .meet seabasing requirements.

A two-year effort, involving two sets of students, the project will also explore what high-speed capabilities could do for seabasing. Although the Navy has been experimenting with the Joint Venture high-speed vessel, an Australian-made car ferry, Calvano said it cannot carry much.

At the. end of the year, students will put out a report that names subprojects to be finished by another group of students next year.

An additional area of study is a conceptual for heavy-lift aircraft such as a rotary wing aircraft or a hybrid rotary wing aircraft that could carry significantly more than a V22 Osprey, he said. But students are not starting off by looking at ways to modify a V-22 for heavier lift.

"We look at what the requirements might be and various ways to meet those requirements", he said. "We're in the process of looking at all those alternatives now".

Calvano explained that the main, purpose of the exercise was to give students a task that would teach them design processes. Although there will be a report at the conclusion of the project, it is not meant to propose a better way of doing things, he said.

The Naval Postgraduate School's conceptual design project last year was Crossbow, which proposed a group of ships that .include a small-deck carrier to launch unmanned aerial vehicles, a logistical ship, and a "street fighting" littoral combat vessel. The concept is based-on the idea that a smaller aircraft-launching ship could engage threats in littorals but would not be a big target for enemy weapons: _

While the findings have been circulating for a year, they have not gained much momentum in the Navy so far, said Wayne Hughes, dean of the Graduate School of Operations and Information Sciences at the Naval

Postgraduate School. Part of the problem was that some people misunderstood the concept as a replacement to the current doctrine of large-deck carrier groups, rather than as a complement to them, he said.

"We are trying to look 15 years into the future,, and there is always the threat that somebody will say, let's defer building the next billion dollar ship, or in the case of carriers, the next $5 billion dollar ship, while we see if these new ideas arc going to gel," Hughes said. "So everybody who is associated with an existing program -- like Joint Strike. Fighter or CVN, DDG, SSNs -- are afraid that there will be confusion between the exploratory work that I advocate and the things that we are pretty sure are still going to be necessary just to keep the fleet above 300 ships."

But Hughes was confident that the Navy eventually would see the need for the Crossbow concept as the Littoral Combat Ship and UAVs move forward. The Navy will learn about hull forms that could apply to a small-deck carrier; and the eventual prevalence of UAVs will create a demand for a ship that could launch several of them, he said.

"[The Navy] is a big elephant that you have to hit over the head a few times before it changes its direction," he said. "We suggested one of the ways that we could answer the problem of inshore combatant, which we all felt was necessary to complement the blue-water navy." – *Jason.Ma*